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VAN NUYS, CALIFORNIA 91406



L-W PHOTO, INC.  
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Van Nuys, California 91406

Telephone: Area Code 213  
781-0457

Please send information on:

- Analytical Projectors, Silent       Analytical Projectors, Sound       Photographic Recording Systems
- I would like a demonstration of the above.

My special requirement or interest is \_\_\_\_\_  
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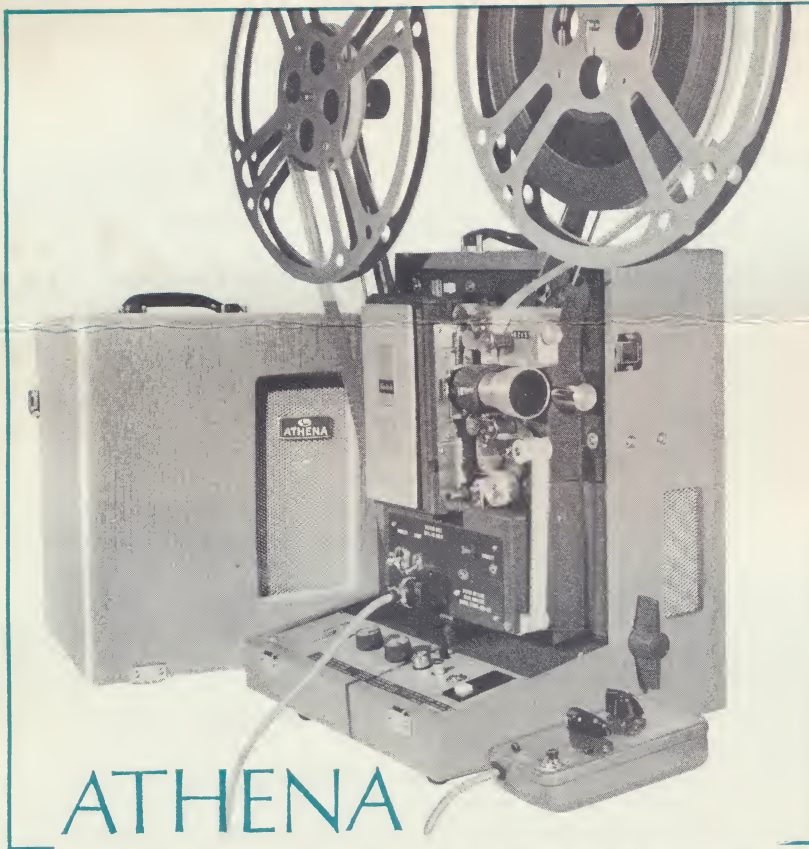
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# 224 ATHENA

16mm SOUND projector



ATHENA

ULTIMATE IN QUALITY & PERFORMANCE

Now! All the outstanding features of the well-known 224-A Photo-Optical Data Analyzer, with the addition of crystal-clear, high fidelity sound! Imagine a projector so versatile that it can be used as an analytical projector AND a theatre-quality sound projector. In the laboratory, in the conference room, in the classroom—wherever performance and dependability are important—ATHENA will do the job.

L-W Photo, Inc. has modified literally thousands of Eastman Kodak Analyst projectors for stop-motion and flickerless projection. As a result of the enthusiasm generated in the field, Eastman invited us to provide the same type of modification to their aristocrat of 16mm sound projectors—the Pageant.

The resulting ATHENA combines Eastman Pageant quality with L-W engineering and know-how to provide the very BEST and most versatile sound projector available anywhere!

COMpletely FLICKER FREE

VARIABLE SPEEDS  
1-2-4-6-8-12-16-24 FPS

STOP WITH NO LOSS OF BRILLIANCE  
PUSHBUTTON SINGLE FRAME

HIGH FIDELITY SOUND  
16 - 24 fps

HEAVY-DUTY 100 - 2,000-FT. FILM  
REEL CAPACITY

QUIETER OPERATION

BRIGHTER, SHARPER PICTURES

ATHENA is a welcome addition to any project involving viewing of 16mm motion picture film. If the film was shot at one frame per hour or 25,000 frames per second, in color or black and white, silent or sound — Athena will project it brilliantly and no portion of the film will be missed through annoying flicker.

The 224-A, stable-mate of the Athena, is now widely used in analytical applications, tracking, radarscope recording, reconnaissance, flight test, time-motion and memo-motion studies, presentations, sales meetings, training, sports and teaching. Athena extends this usefulness with completely transistorized sound. No warm-up here—no tubes to burn out—always dependable and trouble-free. Soft tension safety gates and spring-loaded sprockets protect your valuable film.

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All speeds and directions are operated by remote control and sound is cut off automatically in REVERSE and at speeds other than 16-24 frames per second, eliminating distracting wow and flutter. Athena does its work more quietly, too—no objectionable projector noise to compete with the audio portion of your film.

# ATHENA

16mm SOUND projector

## SPECIFICATIONS

Film capacity: Heavy-duty 2,000-ft. reel arms to handle reel sizes from 100-ft. to and including 2,000-ft. reels at all operating speeds, both forward and reverse. Constant driven film take-up

Cooling system: Constant speed motor driven blower and heat filtering system prevents damage to film, even during prolonged single-frame projection

Power requirement: 105 - 125 volts, 60 cycle AC  
Gate: Easy out fingertip control

Projection lens: 2" f/1.6 coated, with field flattener. Other focal length lenses to order

Lubrication: Mechanism is lubricated for life by oil impregnated bearings, sealed ball bearings and oil retaining pads

Flicker-free projection of 16mm films at all speeds

Sound projection 16-24 fps forward. Instant sound cut-off at all other operating speeds and reverse to eliminate wow and flutter

Still picture projection without loss of light or damage to film; unlimited hold time

Frame-by-frame projection upon command by pushbutton control

Automatic projection at pre-selected speeds of 1-2-4-6-8-12-16-24 fps

Instantaneous change of direction, forward or reverse

Remote control of all operating speeds and directions

Transistorized solid state printed circuit amplifier to provide 12 watt IHFM (Institute of High Fidelity Manufacturers) music power rating. Frequency response 30 - 20,000 CPS. Requires no warm-up

Solar cell sound pickup

Fidelity control to permit focusing sharpest possible line of light on sound track

Heavy-duty 11" x 6" oval speaker built into lift-off side cover of projector case. Permanently attached 40-foot cord with phone type plug

Microphone and phono receptacles to permit use of projector as a high fidelity PA system

Normal projection lamp, 750 watt or 1000 watt, prefocus, burns base down

Simple, straightforward film threading. Loop former

Accepts normal film reels. No special preparation of film reels required

Fast power film rewind. No transferring of belts or reels

Film framing control

Elevating control mechanism

Illuminated frame counter: Five-digit, adds and subtracts, reset to zero

Nylon gears and minimum of moving parts to assure quiet operation

## ACCESSORIES

Wide aperture plate to permit viewing of timing marks

Extension cords for remote control box

Desk top viewing screen

Microphone for use as PA system

CALL OR WRITE FOR  
MORE INFORMATION OR  
FOR A DEMONSTRATION.

NO OBLIGATION,  
OF COURSE.

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